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## Patent Abstracts of Japan

PUBLICATION NUMBER : 2000040517  
PUBLICATION DATE : 08-02-00

APPLICATION DATE : 24-07-98  
APPLICATION NUMBER : 10208993

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INT.CL. : H01M 8/02 C08K 3/04 C08L101/00 H01M 8/10 // C01B 31/04

TITLE : CARBONACEOUS SEPARATOR MEMBER FOR SOLID HIGH POLYMER FUEL CELL  
AND ITS MANUFACTURE

ABSTRACT : PROBLEM TO BE SOLVED: To provide a member that is suitable for a solid high polymer type fuel cell carbonaceous separator, has a high isotropy of its material quality, in particular, small electric resistivity and anisotropy thereof, and excellent gas impermeability and also provide its manufacturing method.

SOLUTION: This carbonaceous separator member is formed from a plate-like formed body which is made up of 100 parts by weight of graphite powder wherein synthetic graphite powder and natural graphite powder are mixed at a weight ratio of 80:20-60:40 and 10-25 parts by weight of a thermosetting resin, and has such characteristics that the average particle diameter A of the synthetic graphite powder is 50  $\mu\text{m}$  or less, the average particle diameter B of the natural graphite powder is one fifth to one tenth as much as A, the electric resistivity in the surface direction is 0.02  $\Omega\text{cm}$  or less, the anisotropic ratio of the electric resistivity (thickness/surface) is two or less, gas permeability is 10<sup>-6</sup> cc/cm<sup>2</sup>.min. In its manufacturing method, the synthetic graphite powder having the average particle diameter A of 50  $\mu\text{m}$  or less and the natural graphite powder having the average particle diameter B of one fifth to one tenth as much as A are mixed at the weight ratio of 80:20-60:40, 10-25 parts by weight of the thermosetting resin is mixed in 100 parts by weight of the mixed graphite powder, they are mix-kneaded and then crushed, the crushed particles each having a particle diameter of 2 mm or less are sieved out and formed into a plate-like body by a thermocompression molding method, and it is heated and set.

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